

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-15. (cancelled)

16. (previously presented) A system for delivering a breathing gas to a patient interface comprising:

a pressure sensor;

a blower;

a valve;

a controller connected to the sensor, blower and valve, the controller comprising a memory having a plurality of executable instructions, wherein the executable instructions comprise:

a first set of instructions sensing a pressure associated with the delivery of the breathing gas to the patient interface;

a second set of instructions changing the valve position in response to a change in the sensed pressure;

a third set of instructions detecting a start of inhalation state by determining if the valve position has increased beyond a start of inhalation state threshold value;

a fourth set of instructions detecting an end of inhalation state by determining if the valve position has fallen below an end of inhalation state threshold value;

a fifth set of instructions delivering the breathing gas at least at a first positive pressure above ambient pressure after detection of the start of inhalation state; and

a sixth set of instructions delivering the breathing gas at least at a second pressure after detection of the end of inhalation state wherein the second pressure is less than the first pressure.

17. (previously presented) The system of claim 16 further comprising a seventh set instructions delivering the breathing gas from the second pressure to the first pressure according to a predefined function and prior to the detection of the next start of inhalation state.

18. (previously presented) The system of claim 17 wherein the predefined function is a linear function.

19. (previously presented) The system of claim 17 wherein the predefined function is associated with a sensed pressure associated with the patient interface.

20. (previously presented) The system of claim 17 wherein the second pressure comprises at least an ambient pressure.

21. (new) A method for delivering a breathing gas comprising the steps of:
providing a pressure sensor, a blower, a valve, and a controller connected to the sensor, blower and valve;
sensing a pressure associated with the delivery of the breathing gas;
changing the valve position in response to a change in the sensed pressure;
detecting a start of inhalation state by determining if the valve position has increased beyond a start of inhalation state threshold value;
detecting an end of inhalation state by determining if the valve position has fallen below an end of inhalation state threshold value;
delivering the breathing gas at least at a first positive pressure above ambient pressure after detection of the start of inhalation state; and
delivering the breathing gas at least at a second pressure after detection of the end of inhalation state wherein the second pressure is less than the first pressure.

22. (new) The method of claim 21 further comprising the step of delivering the breathing gas from the second pressure to the first pressure according to a predefined function and prior to the detection of the next start of inhalation state.

23. (new) The method of claim 22 wherein the predefined function is a linear function.

24. (new) The method of claim 22 wherein the predefined function is associated with a sensed pressure associated with a patient interface.

25. (new) The method of claim 22 wherein the second pressure comprises at least an ambient pressure.

26. (new) A method for delivering a breathing gas to a patient interface comprising the steps of:

providing a pressure sensor, a blower, a valve, and a controller connected to the sensor, blower and valve, the controller comprising a memory defining a plurality of method steps, wherein the steps comprise:

sensing a pressure associated with the delivery of the breathing gas to the patient interface;

changing the valve position in response to a change in the sensed pressure; detecting a start of inhalation state by determining if the valve position has increased beyond a start of inhalation state threshold value;

detecting an end of inhalation state by determining if the valve position has fallen below an end of inhalation state threshold value;

delivering the breathing gas at least at a first positive pressure above ambient pressure after detection of the start of inhalation state; and

delivering the breathing gas at least at a second pressure after detection of the end of inhalation state wherein the second pressure is less than the first pressure.

27. (new) The method of claim 26 further comprising the step of delivering the breathing gas from the second pressure to the first pressure according to a predefined function and prior to the detection of the next start of inhalation state.

28. (new) The method of claim 27 wherein the predefined function is a linear function.

29. (new) The method of claim 27 wherein the predefined function is associated with a sensed pressure associated with the patient interface.

30. (new) The method of claim 27 wherein the second pressure comprises at least an ambient pressure.